

**ABSTRACT**

Apparatus and method are disclosed for digital authentication and verification. In one embodiment, authentication involves storing a cryptographic key and a look up table (LUT), generating an access code using the cryptographic key; generating multiple parallel BPSK symbols based upon the access code; converting the BPSK symbols into multiple tones encoded with the access code using the LUT; and outputting the multiple tones encoded with the access code for authentication. In another embodiment, verification involves receiving multiple tones encoded with an access code; generating multiple parallel BPSK symbols from the multiple tones; converting the BPSK symbols into an encoded interleaved bit stream of the access code; de-interleaving the encoded interleaved bit stream; and recovering the access code from the encoded de-interleaved bit stream.